

TWO NEW VARIETIES OF *ERIOGONUM* (POLYGONACEAE) FROM THE INTERMOUNTAIN REGION

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ABSTRACT.—Two new variants of *Eriogonum* are proposed: *E. brevicaule* var. *atwoodii* from near Fredonia, Mohave Co., Arizona and *E. pharnaceoides* var. *cervinum* from southwestern Utah and adjacent northern Arizona and southeastern Nevada.

After a detailed review of the genus *Eriogonum* (Polygonaceae) for the state of Utah was published (Reveal, 1973a, b), material representing two undescribed varieties was discovered, and these are hereby proposed as new.

Eriogonum thompsonae S. Wats. var. *atwoodii* Reveal, var. nov. A var. *thompsonae* floribus albis et a var. *albifloro* foliis linearis differt. Typus: ARIZONA: Mohave Co.: Along Arizona Highway 389, 4.3 miles west of the junction of U.S. Highway 89A at Fredonia, on rolling reddish clay hills, associated with *Atriplex*, *Ephedra*, *Stanleya*, and *Eriogonum mortonianum*, at about 4700 feet elevation, 15 August 1973, Reveal & Reveal 3211. Holotypus, US! Isotypi, 15 duplicates to be distributed from US.

Low spreading herbaceous perennials (1) 1.5-3 dm high and 2-5 dm across; leaves sheathing up the stems 1-3 cm, linear, 3-8 (10) cm long including the petiole, 2-4 (6) mm wide, thinly to moderately tomentose below, usually glabrous above, infrequently glabrous on both surfaces, the margin inrolled or at least thickened, the nearly indistinguishable petiole about 1/5 the length of the leaf-blade; stems erect, 5-10 (12) cm long, glabrous; inflorescences open, cymose, (5) 8-15 cm long, glabrous; involucre turbinate, 2.5-4 mm long, 1.5-2 mm wide, glabrous, the 5 acute teeth 0.3-0.5 mm long; flowers white, 3-3.5 mm long, glabrous, the tepals oblong; achenes light brown, 2.5-3 mm long.

Other Specimens Examined: From the type area: 21 Jul 1973, Atwood 5584 (BRY, US).

This variety differs from typical var. *thompsonae* in having white flowers. The var. *thompsonae* occurs nearby on the steep slopes near Kanab westward to beyond Pipe Springs, but neither Atwood nor I found var. *thompsonae* in the vicinity of var. *atwoodii*. The var. *albiflorum* Reveal is similar in that it too has white flowers, but var. *atwoodii* differs from it (and var. *thompsonae* as well) in having long, narrowly linear leaves. The discovery of var. *atwoodii* confirms the seemingly close association I have assumed *Eriogonum thompsonae* has had with the more northerly *E. brevicaule* Nutt. and the more easterly *E. lonchophyllum* Torr. & Gray, both of which generally have narrow leaf-blades.

The variant is named for N. Duane Atwood, a former fellow

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graduate student at Brigham Young University, and an outstanding plant collector.

Eriogonum pharnaceoides Torr. in Sitgr. var. *cervinum* Reveal, var. nov. A var. *pharnaceoides* floribus flavis differt. Typus: UTAH: Washington Co.: Foothills south of Pinto on the north slope of the Pine Valley Mountains, associated with pinyon-juniper and other shrubs, 18 August 1973, *Atwood & Higgins* 5395. Holotypus, US! Isotypi, 20 duplicates to be distributed by US.

Erect herbaceous annuals 1-3 dm high; leaves basal and cauline, the basal ones linear-lanceolate to linear-ob lanceolate, 1-3 (4) cm long, 1-2.5 (4) mm wide, lanate below, villous and greenish above, the petiole 1-3 (5) mm long, the cauline ones linear, 0.5-2 (2.5) cm long, 0.5-2 (3) mm wide, tomentose to lanate below, thinly villous to infrequently glabrous above, sessile or on petioles less than 2 mm long; stems erect, villous, leafy; inflorescences open, 0.5-2.5 dm long and up to 2 dm wide, the branches villous throughout; peduncles slender, erect or nearly so, (1) 2-5 cm long, villous to glabrous; involucre campanulate, the tube 1-2 mm long with $5 \pm$ erect, lanceolate lobes 1-2 (3) mm long, villous; flowers yellow, 1-3 mm long, glabrous, the tepals dimorphic, those of the outer whorl oblong-ovate with a large saccate base on each side of the truncate to cordate base, those of the inner whorl linear-oblong and erect, usually far exceeding the length of the outer tepals; achenes brown, 1.8-2.3 mm long.

Other Specimens Examined: ARIZONA: Mohave Co.: Upper Trumbull Mountain, 6500 ft elev, 8 Sep 1953, *Merkle & Merkle* 930 (GCNP). NEVADA: Lincoln Co.: Deer Lodge, 15 Aug 1935, *Hall* s.n. (BRY); Deer Lodge, 7200 ft elev, 1 Sep 1935, *Hall* s.n. (BRY). UTAH: Millard Co.: Cane Springs, 6000-7000 ft elev, 1898, *Purpus* 6229 (K, UC, US). Washington Co.: Pine Valley Mountains, 22 Jul 1973, *Atwood* 5418 (BRY, MARY, US); near Grass Valley Reservoir, 22 Jul 1973, *Higgins* 7921 (US); Mountain Meadows, 15 Aug 1935, *Stanton* 6583 (SD).

The var. *cervinum* differs from var. *pharnaceoides* in having yellow instead of white flowers and occupying a geographical area north and west of the typical variant. The flowers of var. *cervinum* are also a bit smaller, but the measurements overlap.

As I indicated before (Reveal, 1973a), the problem with this variety has been the paucity of material for critical evaluation and use as a type. In 1973, Atwood and Larry C. Higgins obtained specimens of this variant for me, and they succeed rather well. In addition, a visit to the Grand Canyon National Park resulted in the discovery of var. *cervinum* in northern Arizona, and thus the known range can be expanded to include this state for the variety.

LITERATURE CITED

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